



# Flood Control District

of Maricopa County

April 13, 2017

## PRESENTERS:

### **Bill Wiley**

*Chief Engineer/General Manager*

### **Mark Frago**

*Planner*

### **Kelli Sertich**

*Policy/Planning & Coordination  
Branch Manager*

### **Tom Loomis**

*Special Projects Branch Manager*

### **Don Rerick**

*Planning/Project Management Division  
Manager*

~2017~

## MEETING SCHEDULE

- February 9
- April 13
- June 08
- August 10
- October 12
- December 07

*The Flood Stakeholder Group will meet  
the second Thursday of every other  
month unless otherwise indicated.*

## Flood Stakeholder Group

## Adobe Conference Room

## 2:00 – 3:30 pm

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1. **Welcome and Comments** (*Bill Wiley*)
2. **Floodplain Regulations** (*Mark Frago*)
3. **Federal Actions** (*Kelli Sertich*)
4. **Gila River Flow Study** (*Tom Loomis*)
  - USGS N-Value Measurement Project
5. **Project Updates** (*Don Rerick*)
6. **Round Table** (*All*)

**Flood  
Stakeholder  
Group**

# **WELCOME**

**April 13, 2017**



# Agenda

- **Welcome and Comments** (Bill Wiley)
- **Floodplain Regulations** (Mark Frago)
- **Federal Actions** (Kelli Sertich)
- **Gila River Flow Study** (Tom Loomis)
- **Project Updates** (Don Rerick)
- **Round Table** (All)





# WELCOME



- **Yolanda Valenzuela**  
Accountant (*Administration*)



- **Daniel Moreno**  
General Maintenance Worker (*O&M*)



- **Ryan Walker**  
General Maintenance Worker (*O&M*)



# WELCOME



- **Erica Crouch**  
Accountant *(Administration)*



- **Latonya Jordan Smith**  
CIO/PIO *(Executive)*



- **Tanee Morris**  
Administrative Assistant *(Executive)*



# WELCOME



- **Bryan Hunton**  
Inspector Regulatory (*Engineering*)



# Farewell

- **Shelby Brown**

Right of Way Specialist (*Engineering*)

- **Tim Osolin**

Crew Leader (*O&M*)

- **Corey Decker**

Intern (*Communications*)



# Farewell

- **Walt Kinsler**

Associate Project Manager (*PPM*)

- **Alexia Johnson**

Customer Service Rep (*Support Services*)

- **David Charles**

Crew Leader (*O&M*)





# Right-of-Way Use Permitting

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## Online Payments

# Online Payments

## Right of Way Use Permits Online

Project Information

Plan Documents

Review Documents

Approved

**Project**

2017P118

**Group**

<None>

**Name**

Miriam Eber

**Status**

Plan Review in Progress

Review Payment  
Information

**Review Status**

Project Information

Site Address

# Online Payments

MARICOPA  
COUNTY AZ

Flood Control District Right of Way Use Permits Online

## Payment Entry

Payment Method: Credit or Debit Card

### Card Information

Card Information

Expiration Date

December ▼ 2017 ▼

Card Identification Code

... ⓘ



### Billing Information

Name

Miriam Eber

Address

2901 W Durango

City

Phoenix

State

Arizona ▼

Zip

85009

Phone

6025065092

Email

eber@mail.maricopa.gov

Cancel

Continue

# 2017 Public Works Project of the Year

## (27<sup>th</sup> Ave & S Mountain Ave Regional Basin)



March 27, 2017

MS Chris Turner-Noteware, Deputy Director  
City of Phoenix Street Transportation Department  
1034 E Madison Street  
Phoenix, Arizona 85034

RE: 2017 Public Works Project of the Year – Disaster or Emergency Construction Repair – Less than \$5 Million  
American Public Works Association (APWA) – Arizona Chapter

Dear Ms. Turner-Noteware:

On behalf of the Arizona Chapter of APWA, congratulations on the selection of the **27<sup>th</sup> Avenue and South Mountain Avenue Regional Basin** project as this year's recipient of the 2017 Public Works Project of the Year-Disaster or Emergency Construction Repair- Less than \$5 Million Award. Your project was also submitted to APWA National to compete for the National Award.


We plan to celebrate this achievement at the 2017 APWA Awards Luncheon to be held at 11:30 AM, Thursday, August 3rd at the El Conquistador Resort in Tucson. The awards presentation will recognize the managing agency, design consultant, and contractor, as well as the award-winning aspects of the project.

We welcome all members of the team who want to attend this important recognition ceremony. A member of the APWA Awards Committee will be in contact with you to coordinate the attendees, and to provide further details with regard to registration for the event. APWA is pleased to host up to two members of the winning team at the Awards Luncheon.

You may have as many members come forward to receive the award as you wish, however, we ask that comments be made by only one member of the team. Please keep your acceptance remarks to 60 seconds so that we can keep the program moving. Following the presentation of each award, a team photograph will be taken after the members exit the stage.

Please do not hesitate to contact me at (602) 501-4471 if you have any questions. Thank you again for supporting APWA's Arizona Chapter Awards Program.

Very truly yours,

  
Jeanne Sapon, Awards Chair  
Arizona Chapter – APWA

cc: Loretta Flick, Arizona Chapter President  
Paul Arnold, Ames Construction, Inc.  
Scott Burkman, Ames Construction

American Public Works Association  
Arizona Chapter  
P.O. Box 7272  
Phoenix, Arizona 85005



# Floodplain Regulations Update

**Mark Frago, AICP, CFM**

*Planner*

Policy, Planning & Coordination Branch

# Purpose & Introduction

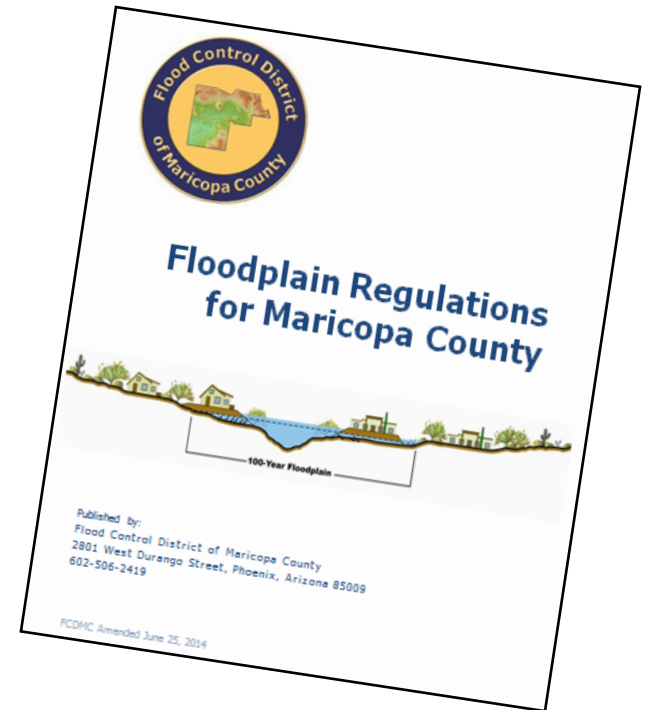
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To Adopt text amendments to the Floodplain Regulations for Maricopa County.

- **No additional regulatory burden** as a result of these proposed text amendments.

# Floodplain Regulations Update

- Changes in state statutes
- FEMA/ADWR audit requiring modifications
- Sand and Gravel taskforce changes
- Clarifications and minor wording changes



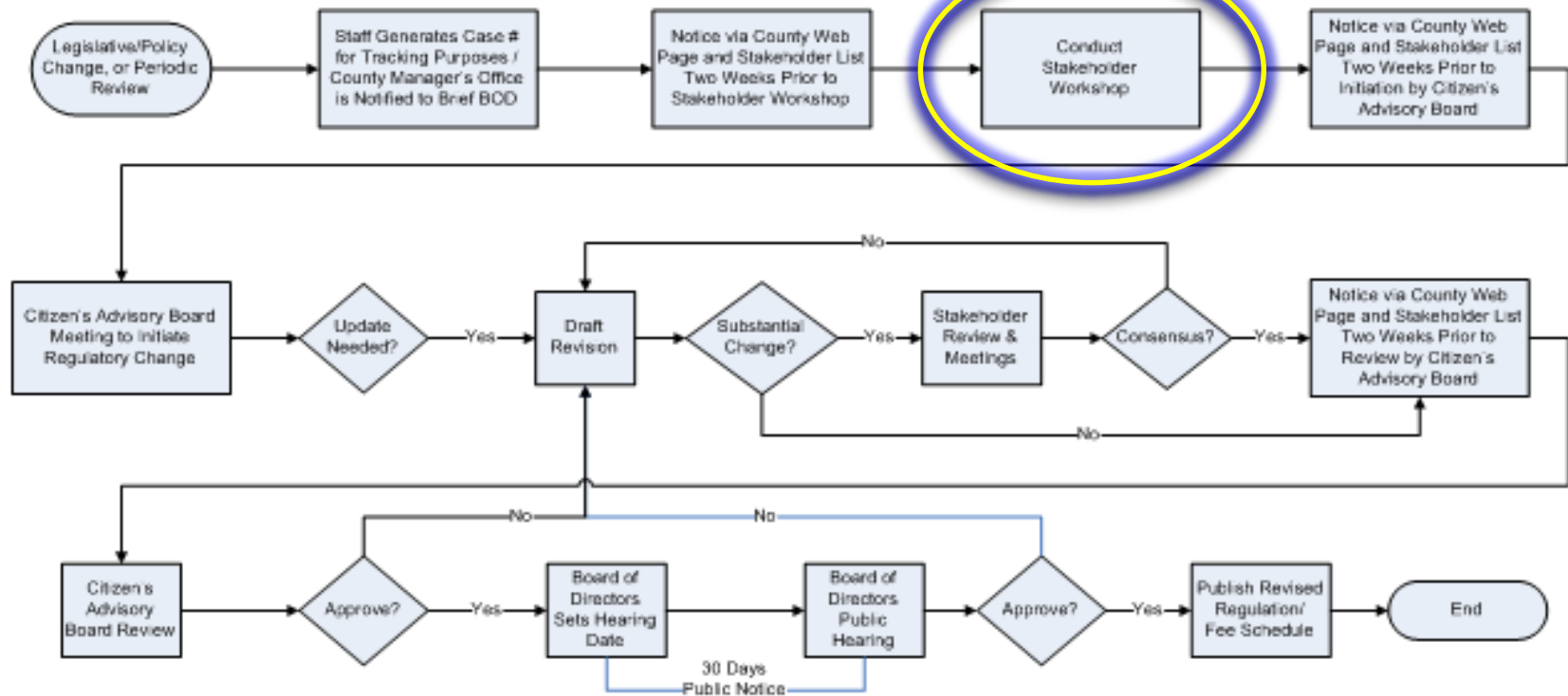
# Key Changes

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- Lifespan permits for Sand and Gravel
- Changes in fees to reflect modified permit structure
- Floodplain Use Permit fee reduction for modifications
- Licensing Timeframe
- Clarifications – minor wording and location changes in document

# Flood Control District

## Fee Schedule/Regulation Modification Procedure



Per Arizona Revised Statute  
ARS §48-3609(E)

# Enhanced Regulatory Outreach Program

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<http://www.maricopa.gov/2838/Enhanced-Regulatory-Outreach-Program-ERO>

# Issues and Next Steps

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- Stakeholder meeting held 4/13/17



- Next Step
  - 1<sup>st</sup> public meeting with the Flood Control Advisory Board (FCAB) scheduled for May 24, 2017



# Questions?



# Federal Actions

**Kelli A. Sertich, AICP, CFM**

*Branch Manager*

Policy, Planning & Coordination

# Transition – What Was Expected

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- New Administration focus on the Economy
- Existing Federal regulations & policies curtailing economic development and/or limiting job growth to be looked at



- All executive orders issued by prior presidents could be overturned as early as the afternoon of Jan 20<sup>th</sup>
- All rules finalized after the end of May 2016 could be subject to the Congressional Review Act overturn

# What's Happened So Far

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- 23 Executive Orders
- 20 Memorandum
- Important to FCD
  - Hiring Freeze (Memorandum)
  - Expediting Environmental Reviews
  - Reducing Regulation & Controlling Regulatory Costs
  - Enforcing Regulatory Reform
  - WOTUS Rule
  - Reorganizing the Executive Branch



# Federal Legislation

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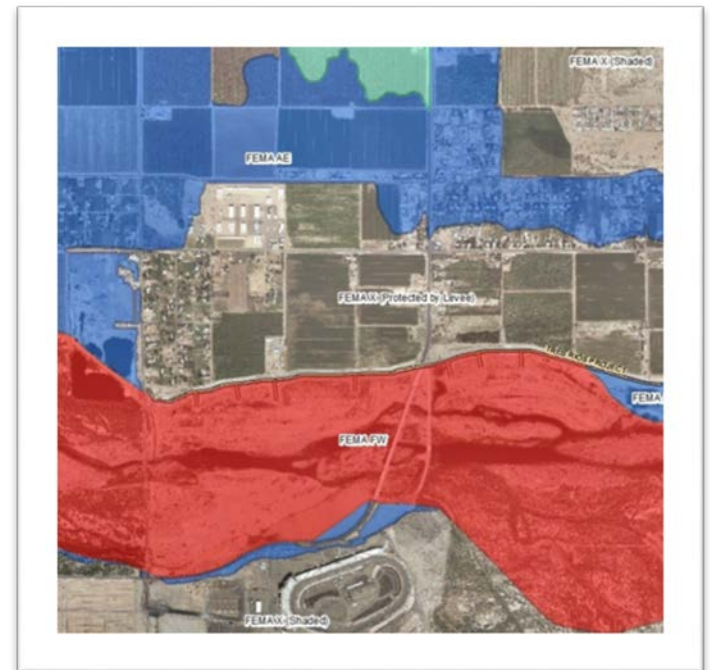
## 3,497 Bills Introduced

### Important to FCD

- NFIP Reauthorization – 7 bills likely rolled into one
- FEMA – Grant Assistance, Disaster Declarations, & Levee Failure Response
- Number of bills about more transparency for EPA, Endangered Species
- Water Infrastructure Improvements for the Nation (WIIN); signed by POTUS 12/16/2016

# Policy/Regulation in Process

- E.O. 13690 Federal Flood Risk Management Standards (FFRMS) – response due on USACE Guidelines
- WOTUS Rule – Expectation to have done by end of year
- Reauthorize & Reform the NFIP – hearings in process
- EO13777 – Reg Reform – EPA RRM – May 15



# Waiting On Action

- Continuing Resolution for current FY expiring; need action to fund Federal government after April 28, 2017
- Next FY Budget in process
- Funding Bills not appearing yet
  - Farm Bill
  - WRDA/WIIN (passed 2016)
  - FEMA Grant Notice of Funding





# Questions?



# Gila River Flow Study n-value Measurement Project

**Tom Loomis, P.E., RLS, CFM**

*Special Projects Branch Manager*

Engineering and Permitting Division



# **Drainage Design Manual (DDM)**

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## **DDM On-Going Maintenance/Updating**

- Hydrology Manual
- Hydraulics Manual



# Why n-value Measurement?

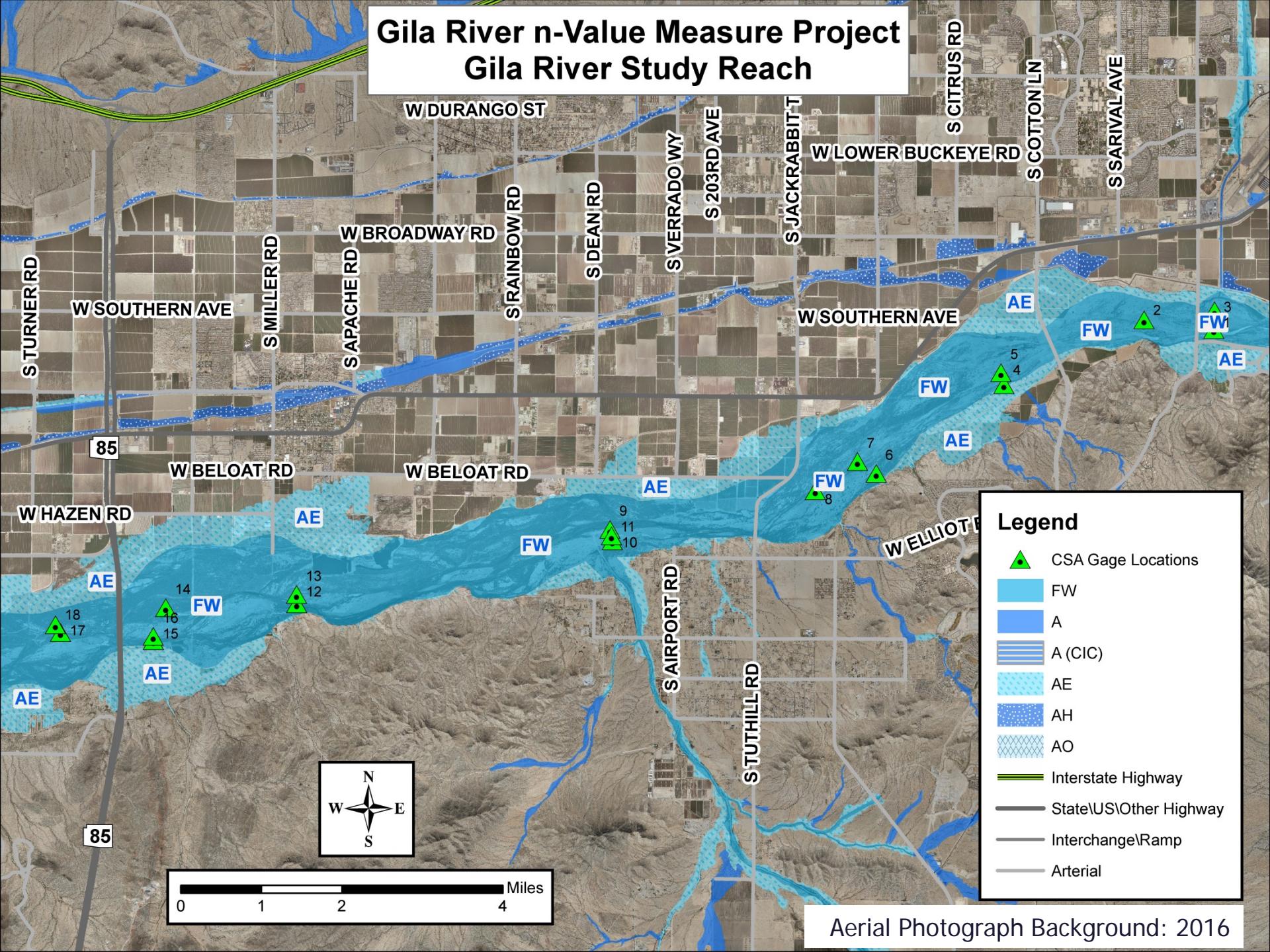
## Friction loss:

- Estimates can significantly affect floodplain widths and depths
- Varies with flow depth and duration
- Vegetation is often removed depending on stream power and flow duration

FEMA requires using existing conditions

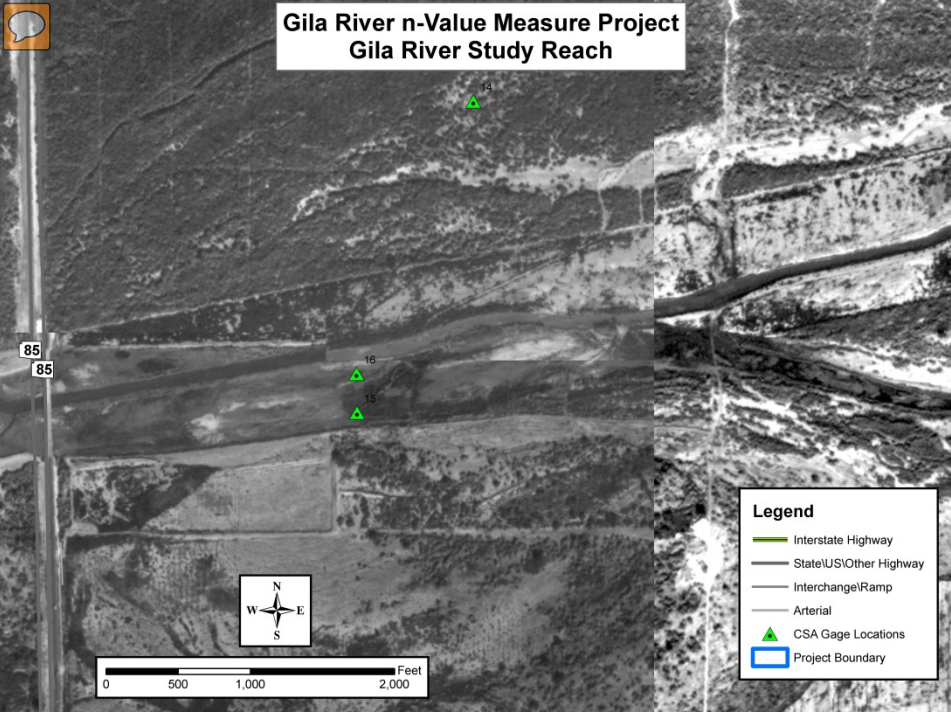
# Gila River n-Value Measure Project

## Gila River Study Reach



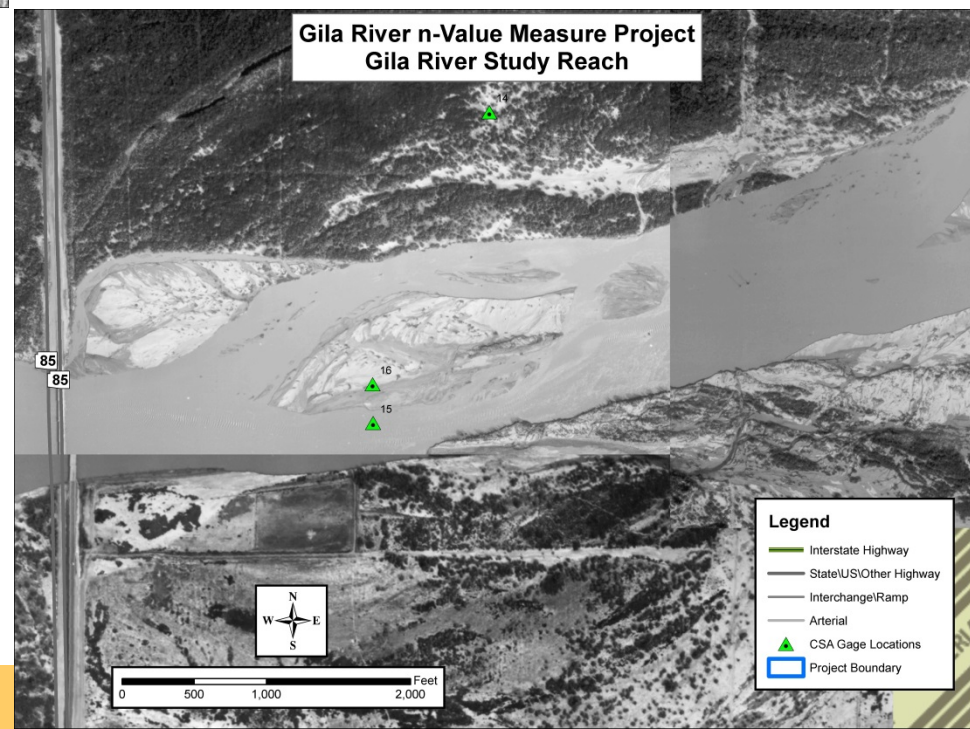


# Gila River n-Value Measure Project Gila River Study Reach



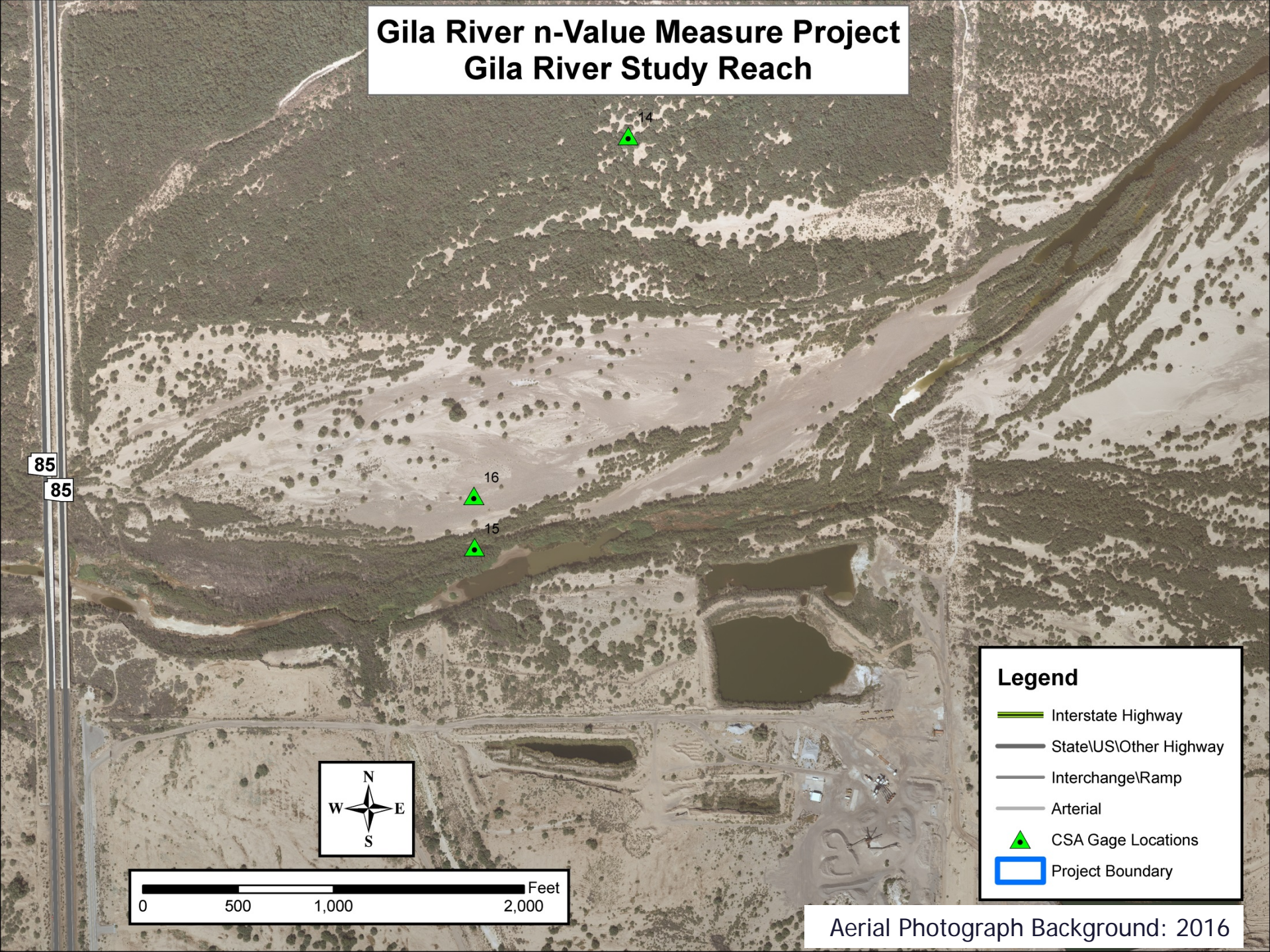
Aerial Photograph Background: 1991

Aerial Photograph Background: 1993



# Gila River n-Value Measure Project

## Gila River Study Reach

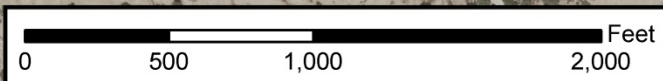


85

85

16  
15

14



### Legend

- Interstate Highway
- State\US\Other Highway
- Interchange\Ramp
- Arterial
- CSA Gage Locations
- Project Boundary

Aerial Photograph Background: 2016



→ Gila River at SR-85: 2015



Gila River Upstream of SR-85: 2015 ←

# Technology Being Applied

- LIDAR topographic mapping and aerial photographs (pre- and post-flood)
- Two-dimensional hydraulic modeling
- Continuous Slope Area Gages
- Particle tracking from videos

**Tilt Sensors**





# Goals

- Use new technologies to more accurately delineate flood hazard areas
- Develop guidelines for applying depth-variable  $n$ -values for flood studies
- Obtain acceptance by FEMA
- Update DDM Hydraulics Chapter 7

# Where To Go To Learn More

## n-value Measurement

- Continuous Slope Area gages and measurements:  
<https://www.usgs.gov/media/videos/continuous-slope-area-method-sycamore-creek-az>
- Particle tracking:  
<https://www.usgs.gov/media/videos/particle-tracking>

## Other Links Of Potential Interest:

- USGS StreamStats (an FCDMC/USGS joint effort):  
[https://streamstatsags.cr.usgs.gov/v3\\_beta/viewer.htm?stabbr=AZ](https://streamstatsags.cr.usgs.gov/v3_beta/viewer.htm?stabbr=AZ)
- Drainage Deign Manual: Hydrology & Hydraulics  
<http://www.fcd.maricopa.gov/4324/Download>



# Questions?



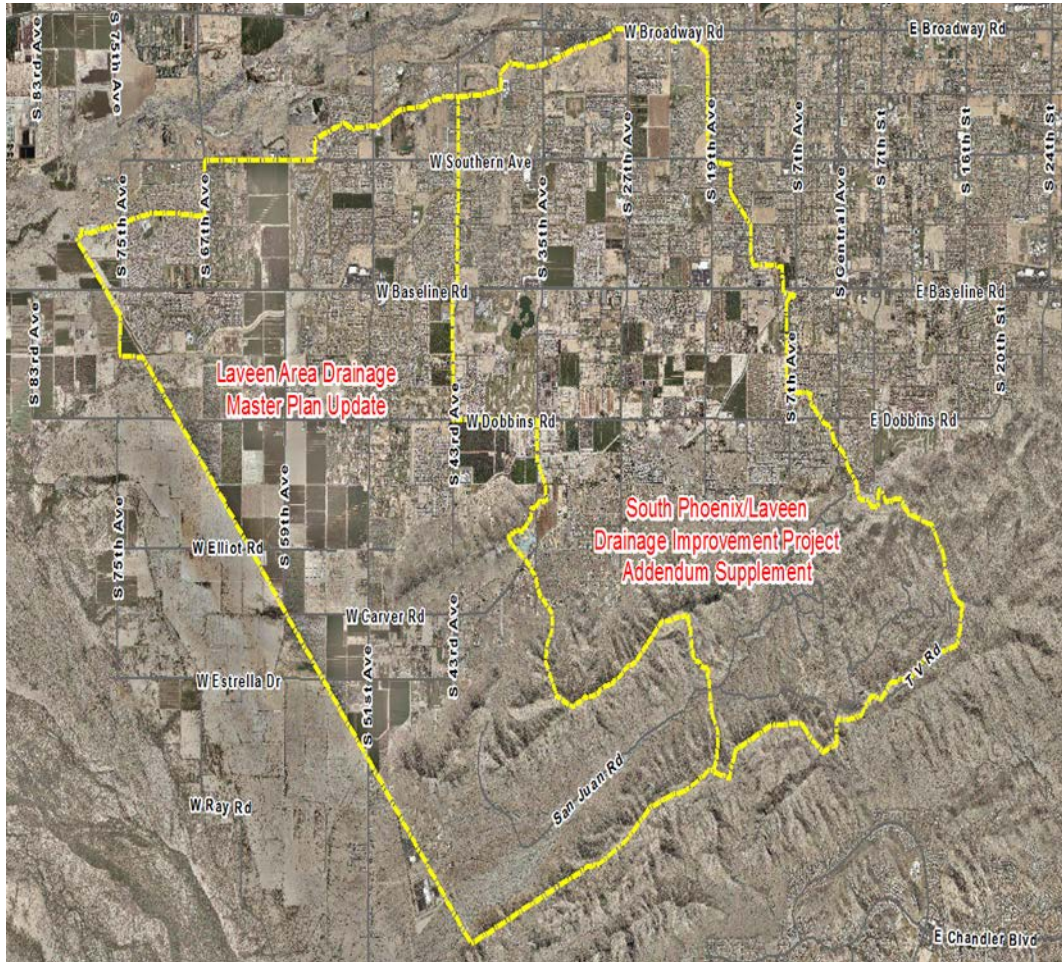
# Projects Updates

**Don Rerick**

*PPM Division Manager*

# Planning Study

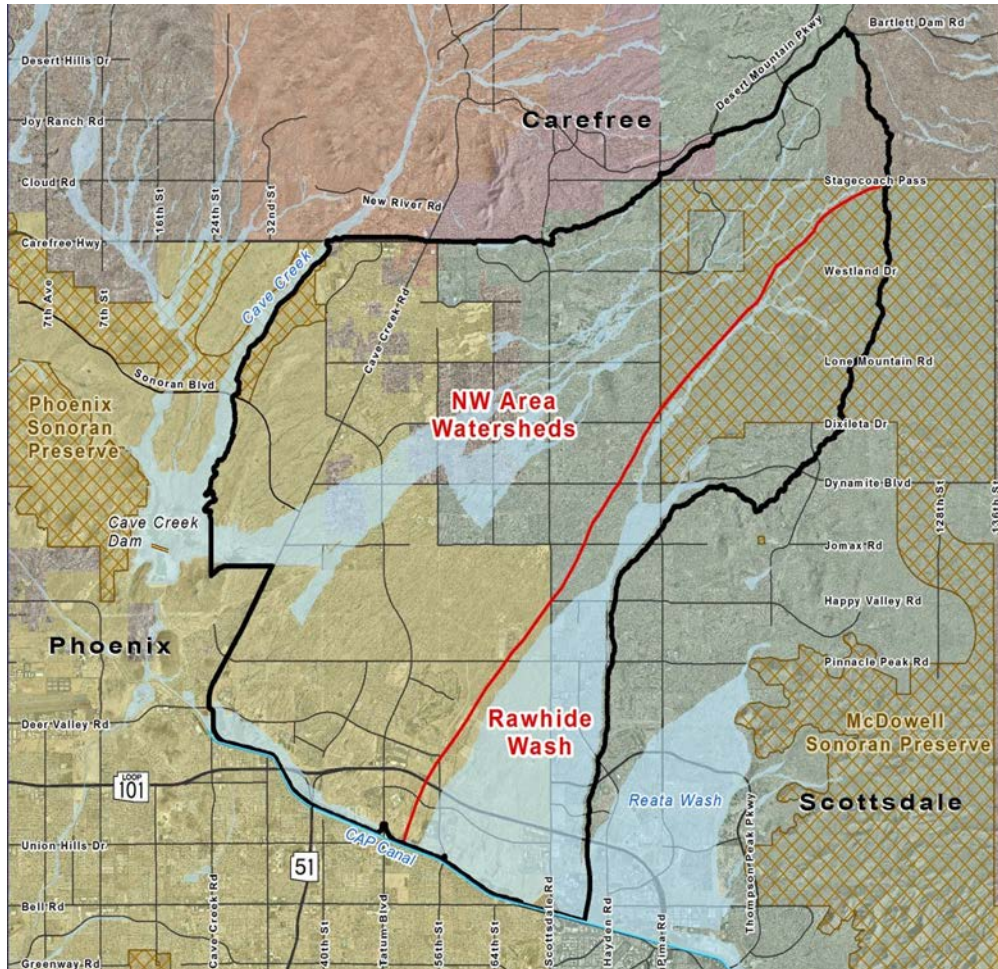
## South Phoenix & Laveen ADMP Update



- **Study efforts continue:**
  - Evaluation of drainage issues and development of possible mitigation alternatives continues.
- **Coordination continues with Phoenix and public meetings have been scheduled:**
  - Public meetings to be held on May 2<sup>nd</sup> and 3<sup>rd</sup>.
- **Final study report and recommendations in summer 2017**

# Planning Study

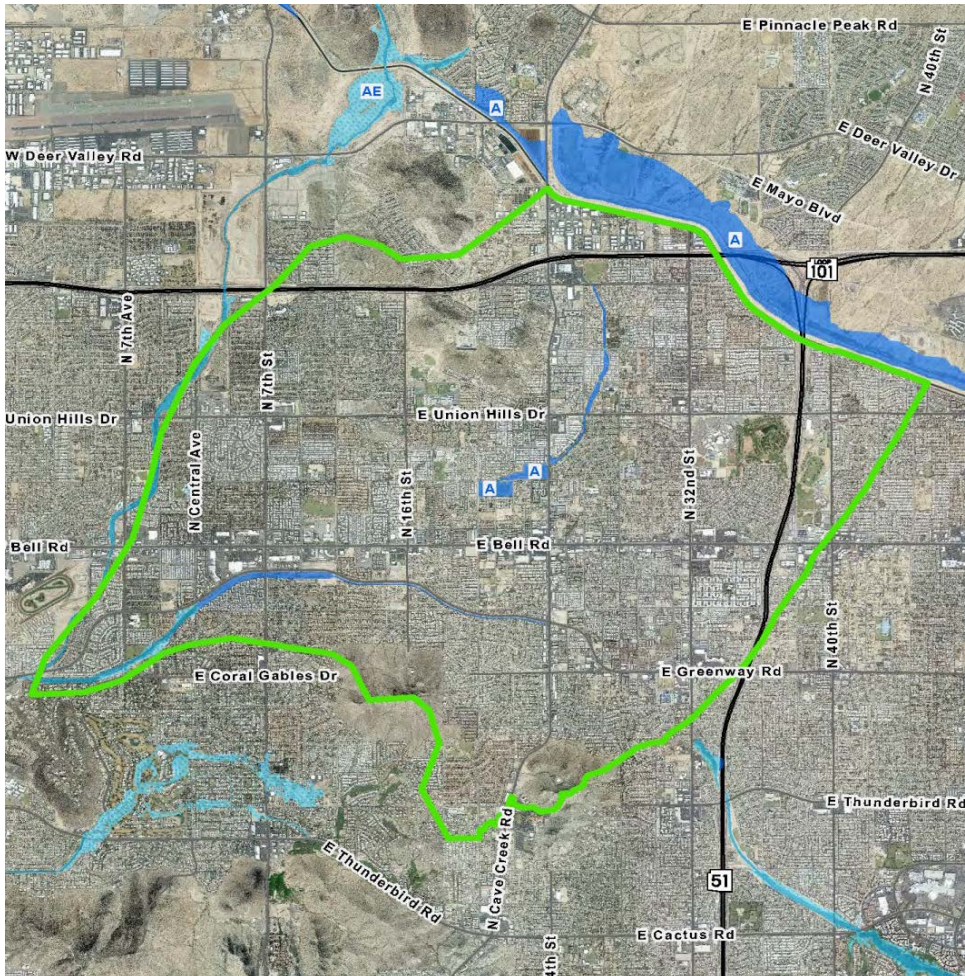
## Pinnacle Peak West ADMS



- **Rawhide Wash preferred mitigation alternative:**
  - DCR initiated to further evaluate components of the preferred alternative
  - Continued coordination with Phoenix, Scottsdale and ASLD on an implementation plan
- **Redelineation of Fans 5 & 6 floodplains:**
  - Floodplain redelineation has been submitted to FEMA
  - Approximately 2,900 properties removed from floodplain

# Planning Study

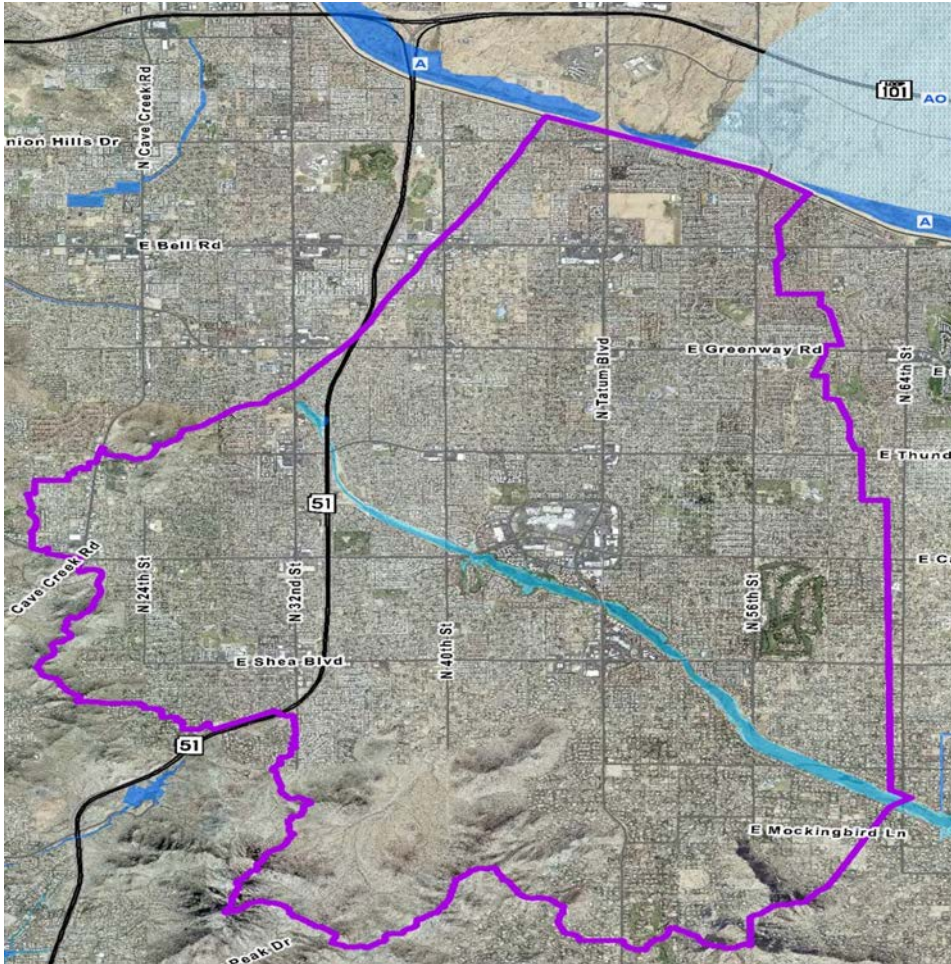
## Upper East Fork Cave Creek Area Drainage Master Study Update



- **Study efforts continue:**
  - FLO-2D modeling update of the Moon Valley Wash area
  - Identify potential mitigation solutions
  - DCRs may be implemented for selected mitigation solutions
    - North Town – Greenway Pkwy. and N. Cave Creek Rd.
    - Crystal Creek Apartments- Bell Rd. and N. Central Ave.
    - Baptist Church Area – Greenway Pkwy - East of 16<sup>th</sup> St.
  - Target completion – Sept. 2017
- **Public outreach efforts continue:**
  - Coordination on-going with Phoenix

# Planning Study

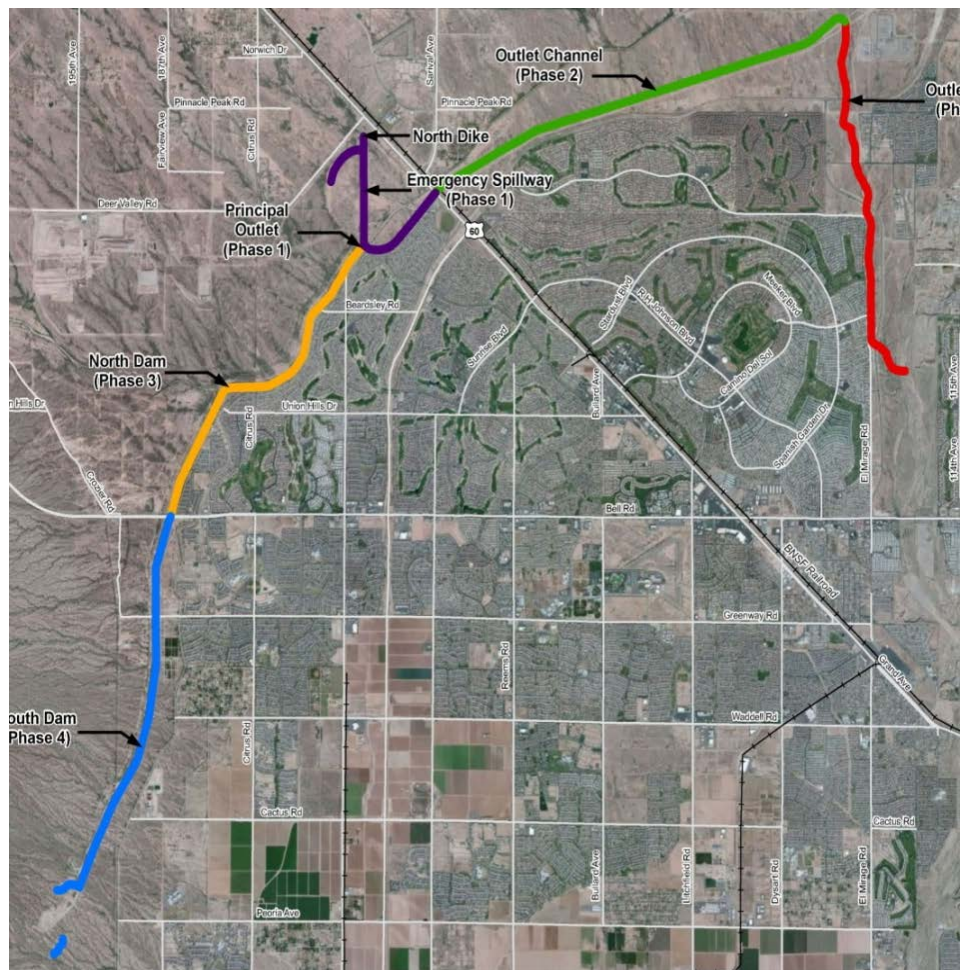
## Middle Indian Bend Wash Area Drainage Master Study



- **Work Assignment #2 activities continue:**
  - FLO-2D and SWMM modeling continues for both the north and south areas of the study
  - Target completion for study – Spring 2018
- **Coordination with Phoenix and Paradise Valley is on-going**

# Design

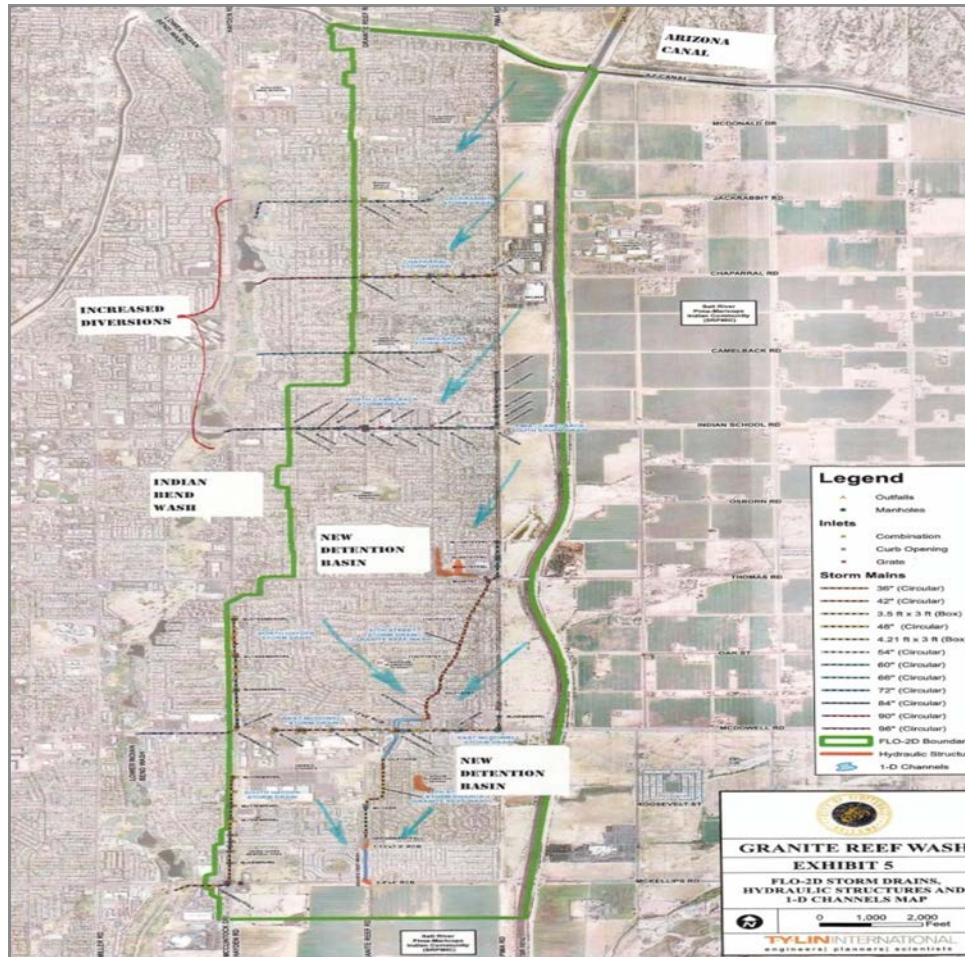
## McMicken Dam Rehabilitation



- Design is being done in phases
- Phase 1 design continues
- Phase 1 target completion – Dec. 2017
- Developing IGA with Maricopa Water District for siphon crossing
- Outlet Channel 30% design is complete
- Remainder of Outlet Channel design to be done in-house

# Design

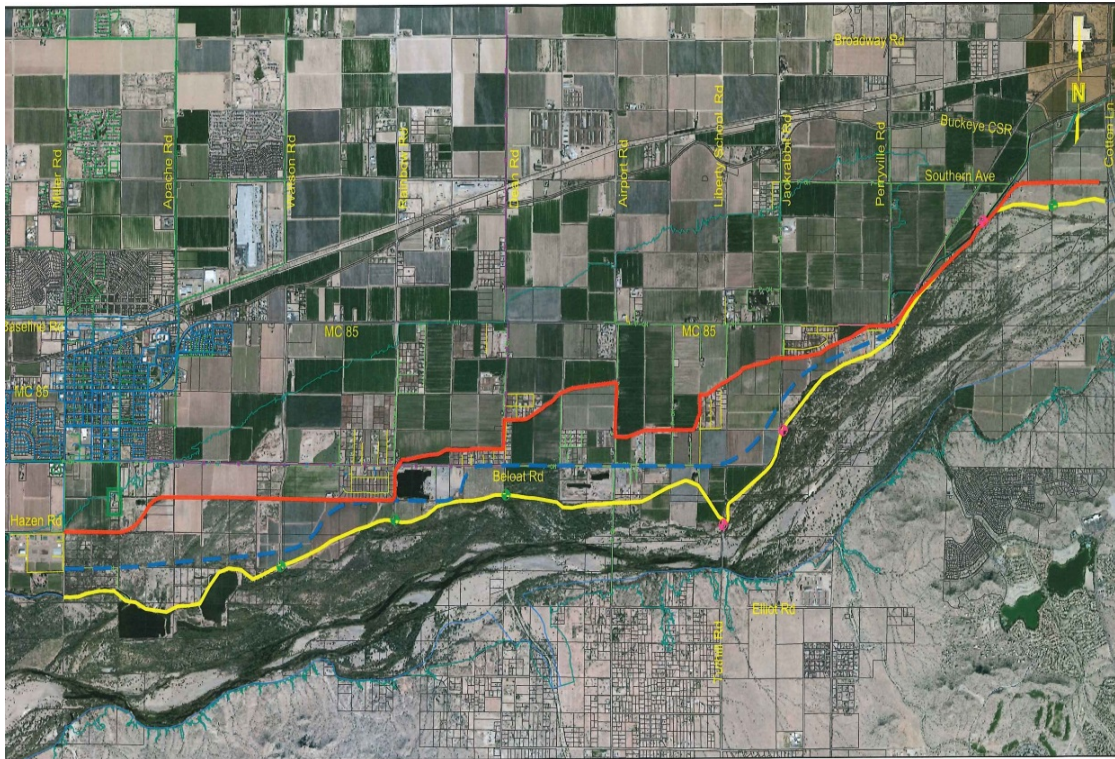
## Granite Reef Watershed Project – Phase 1



- Lead Agency – City of Scottsdale
- Phase 1 activities continue:
  - Phase 1A 100% P&S in April 2017
  - Phase 1A construction start in May 2017
  - Phase 1B 100% P&S in end of 2017
  - Phase 1B construction start in spring 2018
  - Future Phase 2, south of ISR to the Salt River TBD

# Design Concept Report (DCR)

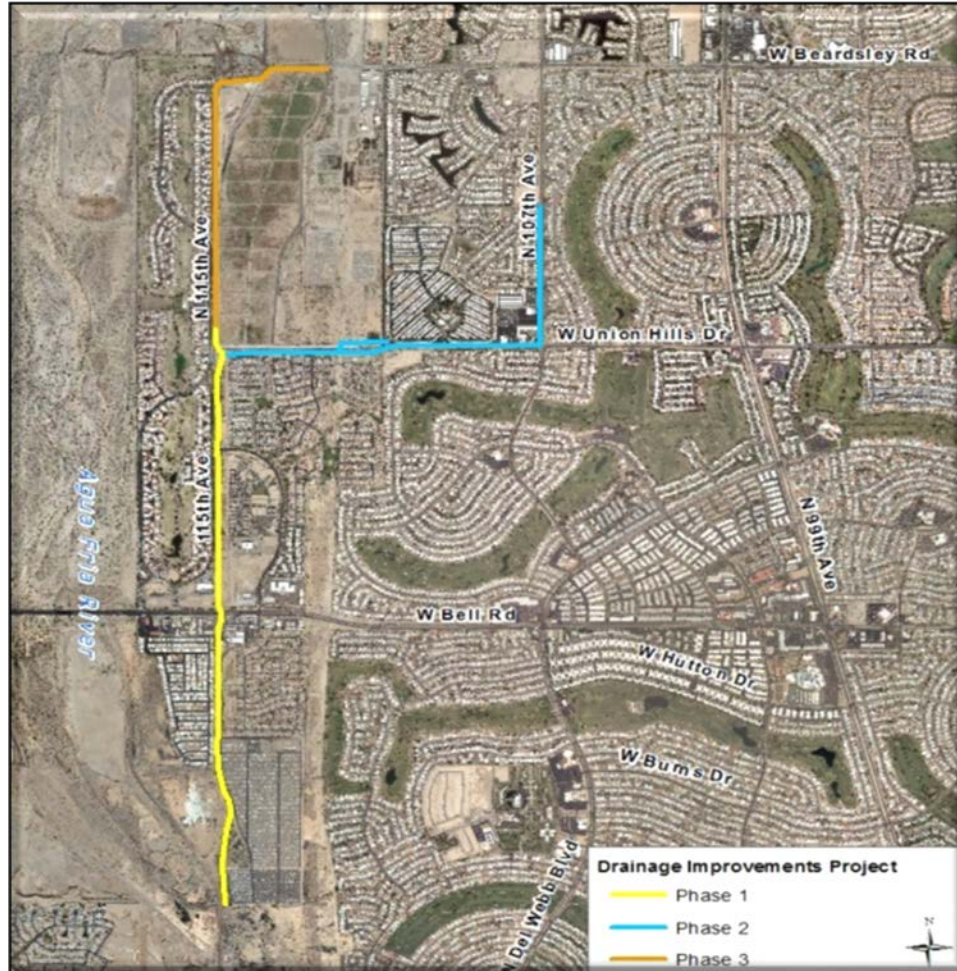
## El Rio Levees



- Partnership with City of Buckeye
- Levee or combination of levee and vegetation management to protect Buckeye Slough from 100-year flood.
  - Continue evaluation of three alternatives
  - 15% plans for recommended alternative being developed
  - Completion late spring 2017

# Construction

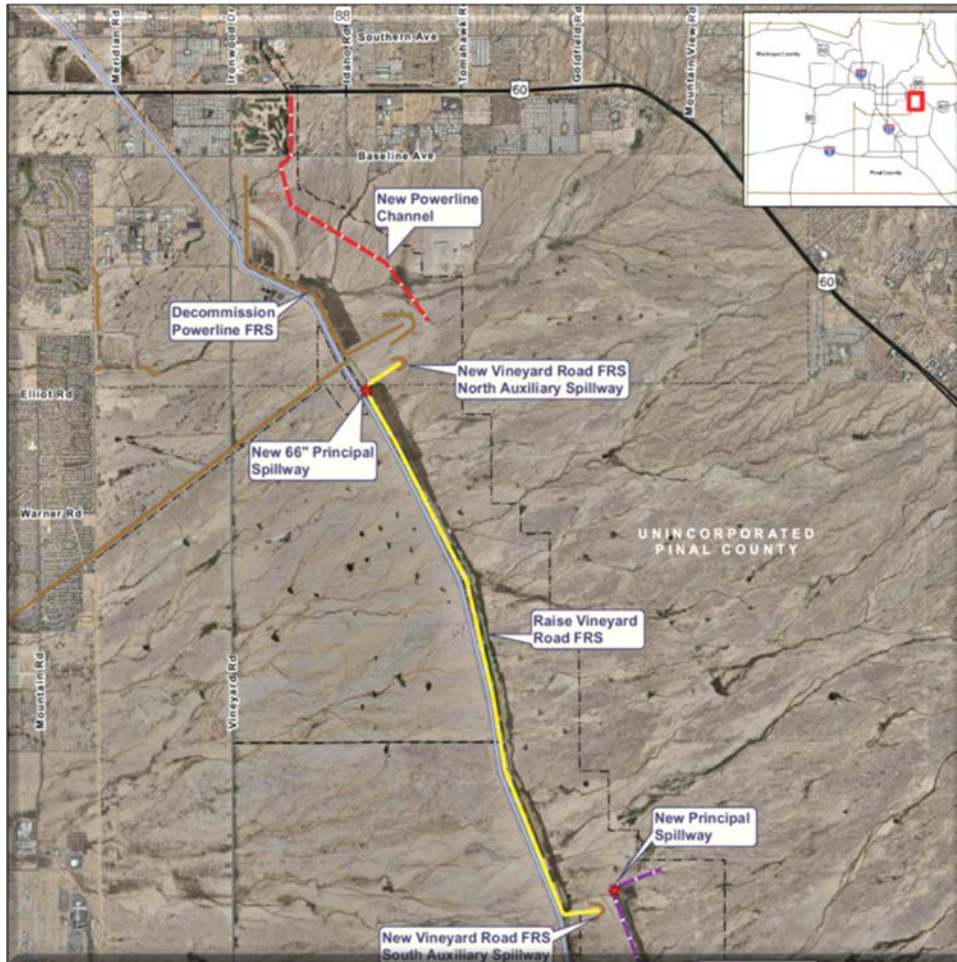
## 115<sup>th</sup> Avenue & Union Hills Drive Drainage Improvements



- Phase 1 and Phase 2 construction is underway
- Utility relocations for Phase 2 complete by June 2017
- IGA Amendment for partner cost share repayment being processed
- Construction completion in June 2018

# Construction Manager at Risk (CMAR)

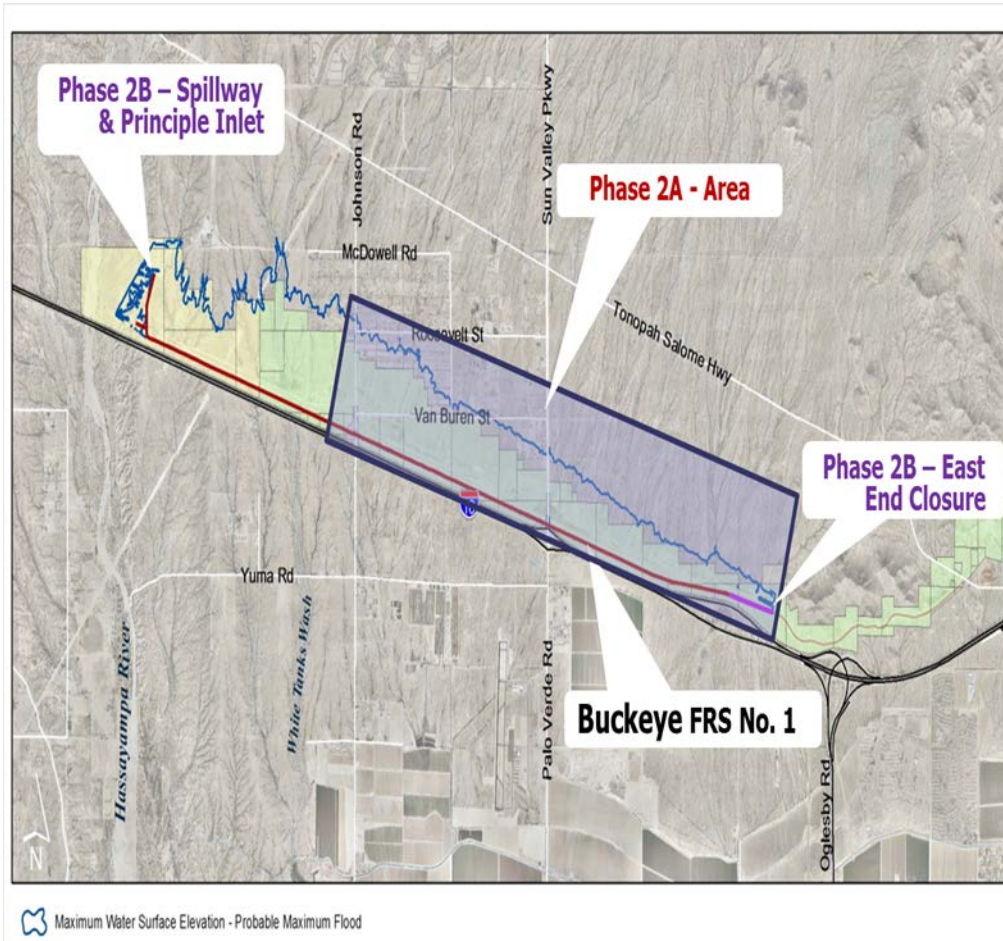
## Vineyard Road & Powerline FRS Rehabilitation



- **Vineyard:**
  - Phase 2A construction is underway with NTP given on March 1
  - Phases 2B & 3 design continues
  - Phase 1 construction completed
- **Powerline:**
  - 90% design effort underway
  - Continuing to resolve utility conflicts
  - Construction phasing developed
  - Continue coordination with ASLD

# Construction Manager at Risk (CMAR)

## Buckeye FRS No. 1 Rehabilitation Project



- Construction of Phase 2A continues with inclusion of elements from Phase 2B
- Phase 2B design continues
- Target completion for Phase 2A with additional 2B work is end of 2017

# Construction Manager at Risk (CMAR)

## White Tanks FRS No. 4 Rehabilitation Project



- Phase 2 Dam Rehabilitation construction activities continue
- Estimated construction completion date is Summer 2017

# Questions ?

View of impoundment  
behind Cave Buttes Dam,  
Jan. 2010. Impoundment  
was 19% full.

To the right is the old Cave  
Creek Dam built in 1923 that  
is no longer functional  
because of the newer Cave  
Buttes Dam built in 1980.



# ROUND TABLE

